UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,190	07/15/2003	Gustaaf Persoons	FMCNV121470	2343

26389 7590 06/25/2008

CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER	
THAKUR, VIREN A	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
06/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/621,190	PERSOONS, GUSTAAF	
	Examiner	Art Unit	
	VIREN THAKUR	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2008*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-11 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-11 and 13-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2, 4-5, 7-11, 13 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dodrill (US 5283033) in view of Lagerstadt (US 6177048) for the reasons given in the prior Office Action, mailed November 28, 2007.

As previously stated, the claims differ from Dodrill in the particular conventional material of construction for the package within which the food has been placed. Lagerstadt teaches that it has been well known in the art to use cardboard containers for retort processing food products. It is noted that Lagerstadt also recognized the problem with moisture absorption within paperboard containers (column 2, lines 18-27).

Nevertheless, by lowering the pressure within the vessel, compared to the pressure of the container to cause the container to bulge, Dodrill inherently teaches the concept of a pressure gradient. By creating such a gradient, the contents within the pressure gradient would have been forced into the region of lower pressure, thus preventing moisture from entering into the package.

Regarding the limitation of the theoretical total pressure being calculated from a theoretical vapor pressure based on the corresponding control temperature and a theoretical partial air pressure based on the corresponding control temperature" it is noted that Dodrill teaches that the pressure inside the processing tank is maintained at about the sum of the partial pressures of the air and the partial saturated water vapor pressure inside the package. These are considered both theoretical values since the partial air pressure is calculated using the ideal gas law and the vapor pressure is calculated from steam tables at the desired temperature (column 12, lines 23-31). This is similarly done for Dodrill's come-down phase, as described on column 16, lines 28 to column 17, line 48).

4. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dodrill (US 5283033) in view of Lagerstedt (US 6177047), as applied to claims 1-2, 4-5, 7-11, 13 and 15-20, above, and in further view of McHenry et al. (US 4667454).

The claims differ from the combination of Dodrill in view of Lagerstedt in specifically reciting a particular known sterilization method, specifically, whereby the method of processing said food product is an agitation method.

As disclosed, applicant employs agitation to make the heat exchange more efficient, thus allowing the food product to more uniformly contact the walls for heat transfer.

McHenry et al. disclose that it was conventional in the art to employ a method of sterilizing a food product within a deformable container wherein the sterilization process incorporates agitation of the heated containers, which in turn causes agitation of the contents of said heated containers, for the purpose of more uniformly contacting the food product with the sidewalls and bottom wall; thus improving heat sterilization and cooling (Column 15, Line 29-55). Applicant also employs the agitation for more efficient sterilization.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the combination of Dodrill and Lagerstedt to incorporate agitated sterilization, as taught by McHenry et al. for the purpose of providing more uniform cooling and heating which can also further control the buildup of pressure. Such a modification will assist in maintaining the integrity of the food container during sterilization.

Response to Arguments

5. As a result of the amendment to the claims, the rejection of claims 1-2, 4-5, 7-11, 13 and 15-20 under 35 U.S.C. 112, second paragraph has been withdrawn.

6. Applicant's arguments with respect to the rejection of claims 1-2, 4-5, 7-11, 13 and 15-20 under 35 U.S.C. 112, first paragraph have been considered and are deemed persuasive.

7. On page 12 of the response, applicant asserts that Dodrill does not teach or even suggest a cooling phase whereby pressure within the control vessel and outside of the container is controlled according to the temperature inside the control vessel and outside of the container.

The claims recite that the control temperature and pressure must be within the vessel and outside of the closed container and reducing the control pressure and temperature by predefined pressure and temperature schedules. Nevertheless, the control temperature and control pressure within the vessel and outside of the closed container are taught by Dodrill, since the pressure and temperature of the vessel are the values that are controlled (column 4, lines 50-56). The claims do not recite nor does the specification define how the control temperature is derived, but merely states that it is the temperature of the vessel. From table 1, it is not clear as to how "Tset point" has been determined. It is clear, however, that Pset point is determined based on Tset point, as shown in table 2. As described in page 7 of the specification, "Pvapor" and "Pair" are both theoretical values based on the control temperature. But since the

control temperature appears simply to be a temperature for sterilization, it can be derived from within the vessel or from within the container, provided that it is used as the temperature of the vessel. Regardless, Dodrill thus teaches a control temperature within the vessel but outside of the container, since the vessel and not the container is controlled to prevent bursting and imploding of the container. Although Dodrill teaches using the theoretical vapor pressure and theoretical air pressure within the container, as cited on column 5, line 68 to column 6, line 4, it is noted that Dodrill is using this as an equilibrium type measurement. Therefore this calculated pressure would have been equivalent to the pressure in the vessel, since "the pressure inside the processing tank is maintained at about the sum of the partial pressures of the air and the partial saturated water vapor inside the package" (Column 6, line 1-4). The equilibrium point is even further supported by the fact that Dodrill teaches on column 10, lines 41-43, that line 18 of Figure 2 represents the internal pressure of the package and the necessary internal pressure of the processing tank. Furthermore, on column 11, lines 60-67, Dodrill teaches that the equilibrium temperature (i.e. temperature within the vessel and the container) is determined and the resultant pressure is determined based on this temperature. On column 5, line 53 to column 6, line 6, Dodrill teaches that the package reaches the predetermined sterilization temperature, and the pressure inside the process tank is maintained equal to about the sum of the partial pressure of air and the partial saturated vapor pressure inside the package" using the ideal gas law at the average temperature at the headspace. This is the temperature to which the processing vessel has been set. The pressure during the come-down phase is

determined by the sum of the partial pressures of the air and water vapor, which would have been based on this temperature. Since the control temperature for the processing vessel is based on the temperature in the package upon cooling, whether the theoretical vapor pressure and theoretical air pressure was determined based on the package or the vessel would not have provided a patentable distinction over the prior art and would have been obvious for art recognized in applicants intended function, since these theoretical values have been based on the same temperature and since an equilibrium environment is achieved and since the vessel temperature and pressure are still controlled such that the pressure in the food container is greater than the pressure in the vessel. In addition, as discussed in the Office Action mailed June 13, 2007, Dodrill teaches actively reducing the control pressure within the vessel for the purpose of preventing the container from irreversibly collapsing or expanding, and the temperature within the vessel is also measured at this point to ensure that the container does not irreversibly expand or collapse (Column 7, Lines 31-40).

On page 14, applicant further asserts that the examiner has failed to articulate a reason as to why the teachings of Dodrill and Lagerstedt would render obvious the limitation, "wherein the control temperature and control pressure are within the vessel and outside of the closed container." As previously stated, Dodrill teaches using measurements and calculations of the pressure within the package to determine the pressure and temperature to be used to control the processing tank. It is further noted that one of the steps to the method taught by Dodrill is to control the pressure and temperature within the vessel. As discussed above, applicant has not provided any

definition for how the control temperature (Tset) has been obtained. The control pressure is determined as a result of this control temperature. The control temperature and the resulting control pressure are determined based on measurements of the package. Since at the point of cooling the package and vessel are essentially at equilibrium, the fact that the calculations for the control pressure for the vessel are determined based on the pressure inside the package are an obvious matter of choice and/or design. Even further, Dodrill teaches that it has been conventional in the art to perform experimental tests prior to mass production (column 2, lines 62-64), which thus defines a predetermined schedule, and by the calculations that show the change in temperature within the package used to determine the temperatures within the vessel. Therefore, the predetermined temperature and pressure schedules at cooling would have been obvious based on the fact that a sterilization profile (such as that shown in Figure 2) and as taught by Dodrill has been a conventional means to determine the desired temperatures and pressures to prevent damage to the package while also being able to predetermine the effects of the desired temperature and pressure on the container to be sterilized. It is noted that applicant has also indicated on page 9, lines 18-21 of the response that "the momentary pressure inside the paperboard will be slightly higher than the momentary pressure inside the vessel and outside of the container, thus helping to prevent moisture absorption." It is unclear as to whether applicant is indicating that this is an inherent result of the different in pressure between the vessel and the container. Nevertheless, it is noted as discussed above, that

modified Dodrill also teaches an increased pressure within the container versus the pressure of the vessel, thus causing a bulge in the container.

Regarding Lagerstedt, it is noted that this reference has been relied on to teach that the art as recognized the problem of water absorption into the container and further teaches continued use of cardboard containers, in spite of the ingress of water, due to their economic viability. Dodrill teaches that it was conventional and advantageous to maintain a greater pressure within the food container than the vessel so that the food container would not implode. It would have been obvious to modify the particular type of container and substitute one conventional material of construction for another conventional material of construction, since Lagerstedt teaches the economic viability of paperboard containers. Therefore, any other advantage derivable through the combination would have been obvious and inherent.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIREN THAKUR whose telephone number is (571)272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steve Weinstein/
Primary Examiner, Art Unit 1794

/V. T./
Examiner, Art Unit 1794